

Remarks

Claims 1-18 remain pending in this application after entry of this paper. The Examiner has rejected pending claims 1, 5-7, 10, and 14-16 under 35 U.S.C. § 102(b) as being anticipated by Gasper et al. (US Patent No. 5,278,943). The Examiner has also rejected claims 2-4 and 11-13 under 35 U.S.C. § 103(a) as being unpatentable over Gasper et al. (US Patent No. 5,278,943). The Examiner has rejected claims 8-9 and 17-18 under 35 U.S.C. § 103(a) as being unpatentable over Gasper et al. (US Patent No. 5,278,943) in view of Friedman (US Patent No. 6,182,029)

Applicants' invention generally comprehends a method and apparatus for recording prosody for fully concatenated speech wherein a digital voice library and a method of making a digital voice library for use in text to concatenated voice applications are disclosed.

Regarding the rejection of claims 1, 5-7, 10, and 14-16, a method of making a digital voice library used for converting text to concatenated voice in accordance with a set of playback rules is disclosed. Further, the digital voice library includes a plurality of speech items and a corresponding plurality of voice recordings wherein each speech item corresponds to at least one available voice recording. The multiple voice recordings that correspond to the speech items represent inflections of that single speech item. The method comprises establishing a vocal sequence and then recording the voice talent uttering the vocal sequence. A complex tone is generated that reflects a particular inflection required for a particular voice recording of a particular speech item. The complex tone is composed of portions of the recording of the voice talent uttering the vocal sequence. The voice talent is recorded reciting the speech item to make the particular voice recording. The voice talent uses the complex tone as a guide to allow the voice talent to recite the particular speech item in accordance with the particular inflection.

Specifically, the complex tone of Applicants' independent claim 1 acts as a guide from which the vocal talent is to follow when reciting the vocal sequence to provide a particular inflection for a particular voice recording. The digital voice library is generated from speech items representing various inflections recorded as recited by the voice talent specifically using the complex tone composed of the voice talent's own utterances as a guide.

However, in Gasper pre-recorded speech samples retrieved from a library are processed to add inflection and other auditory effects to create animated or artificial voices. Gasper merely describes a voice animation system whereby pre-recorded speech samples are divided into basic segments for use in a text to speech synthesizer to artificially synthesize speech. The voice talent does not recite vocal sequences with the proper inflection while using a complex tone composed of the voice talent's own utterances as a guide, but rather, it is the pre-recorded samples that are processed after being recorded to add inflection and other auditory effects to create animated or artificial voices according to a prosody rule set. In Applicants' claim 1, a complex tone is generated "that reflects a particular inflection required for a particular voice recording of a particular speech item" and further "recording the voice talent reciting the particular speech item to make the particular voice recording, the voice talent using the complex tone as a guide to allow the voice talent to recited the particular speech item in accordance with the particular inflection." Thus, in Gasper, the speech animation and inflections are synthesized in a second stage after the segments are retrieved from the library and speech output is then processed from the pre-existing segments whereas in Applicant's invention, the voice talent uses the complex tone as a guide to recite the particular speech items in accordance with the particular inflection, which are segmented and stored in the digital library.

The Examiner specifically refers to col. 7, ll. 3-7 of Gasper, to teach "generating a complex tone that reflects a particular inflection required for a particular voice recording of a particular speech item, the complex tone being composed of portions of the recording of the voice talent uttering the vocal sequence." Further, the Examiner points out col. 4, ll. 41-51 of Gasper as showing "recording the voice talent reciting the particular speech

item to make the particular voice recording, the voice talent using the complex tone as a guide to allow the voice talent to recite the particular speech item in accordance with the particular inflection." However, col.7,- ll. 3-7 discusses processing voice segments retrieved from the library and synthesized to create a human quality voice and col. 4, ll. 41-51 merely discusses a user's option to create and edit a prosody rule set to enhance the quality of human-like speech produced by the voice animator. Both of these features are used to process voice segments extracted from the library once the voice library has already been generated. In contrast, Applicants' claim 1 teaches generating a complex tone having a particular inflection needed for a particular recording from portions of the recording of the voice talent. This complex tone is then used as a guide by the voice talent to recite specific utterances having specific inflections for making recordings necessary to generate the digital voice library.

Independent claim 10 is believed to be patentable for similar reasons as described above for claim 1.

Claims 2-4 depend from independent claim 1, and claims 11-13 depend from independent claim 10 and are believed to recite additional features not described or suggested by Gasper. As described above, Gasper fails to teach the complex tone being composed of portions of the recording of the voice talent uttering the vocal sequence and the use of the complex tone as a guide by the voice talent to recite specific utterances. Claims 2-4, and 11-13 further describe establishing the vocal sequence and recording the voice talent. As Gasper fails to teach the features described in the independent claims, the subject matter of claims 2-4, and 11-13 are also believed to be patentable.

Regarding claims 5-9, these claims are dependent claims and are believed to be patentable.

Claims 14-18 depend from claim 10 and are also believed to be patentable.



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